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ABSTRACT

Recent research in the field of learning disabilities and other sources of information which may prove useful to college-level reading instructors in teaching the college-level dyslexic are summarized in this paper. The paper identifies research on techniques of formal and informal assessment, psychological and social factors, and remediation programs (including those using computers) with an emphasis on the particular problems associated with the adult learning disabled student. The paper concludes that most reading researchers reject the notion that learning disabilities are due to brain dysfunctions. Instead, the paper suggests that the causes of reading disabilities are multiple, arising largely from educational and social contexts outside the individual. Twenty-six references and appendixes listing suggestions for college faculty and the characteristics of learning disabled college students are attached. (RS)

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DYSLEXIA AND THE COLLEGE STUDENT

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DYSLEXIA AND THE COLLEGE STUDENT

In 1968, the Research Group on Developmental Dyslexia and World Illiteracy proposed the following definitions to describe dyslexia:

1. Specific developmental dyslexia: A disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence and sociocultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin.

2. Dyslexia: A disorder in children who, despite conventional classroom experience, fail to attain the language skills in reading, writing and spelling commensurate with their intellectual abilities.

By and large, the first definition of dyslexia has been rejected by the research community as not applicable to the great majority of students who are labeled "dyslexic" (Stanovich, 1988). It is true that many parents and even some educators still propose such a definition. For example, a recent federally funded report begins with this outdated and uninformed definition of learning disabilities (Barr, et al., 1987, p. 2):

> A learning disability is a disorder which affects the manner in which individuals with normal or above average intelligence take in, retain, and express information. Like interference on the radio or a fuzzy TV picture, incoming or outgoing information may become scrambled as it travels

between the eye, ear, or skin, and the brain.

Despite the utter rejection among reputable researchers of this "telephone switchboard" metaphor for learning disabilities, and despite the telling blows by researchers against the whole conceptualization of learning disabilities and dyslexia (as, for example, in Coles' devastating 1987 critique of the "learning disabilities mystique") it is apparent that federal funding may still be largely directed toward institutions that use the traditional terminology.

With Coles, we reject the idea that the millions of children diagnosed as learning disabled are suffering from some sort of minimal brain dysfunction. Instead, we suggest (in accordance with most reading researchers) that causes of reading disability are multiple, arising largely from educational and social contexts outside the individual. As Coles suggests, reading and learning difficulties

> and any neurological dysfunctions associated with them, develop not from within the individual but from the individual's interaction within social relationships. Brain functioning is both a product of and a contributor to the individual's interactions, it is not a predetermined condition (1987, p. xvii).

Yet, despite the flaws in attempts to blame the nation's reading problems on brain dysfunction, some helpful research has arisen from the field of learning disabilities. The purpose of this report is to survey some of this research and to cite sources of information that can prove useful to college level

reading instructors. The definition of "dyslexia" to be followed in this report is the second definition of the Research Group on Developmental Dyslexia and World Illiteracy quoted above.

Otto (1986) has suggested that the term dyslexia (meaning, simply, being unable to read), is a term, not an explanation,and has been grossly misused. Given this simple, literal meaning, the cure would be, simply, to learn to read. To view dyslexia as a medical term, that dyslexia is the result of a brain defect or malfunction, is a disservice to the subjects which receive this label. The real positive focus on reading disabilities ought to be on early detection and remediation.

Assessment

According to Chall (1984) there has been a tendency to deemphasize assessment and evaluation of the reading disabled adult. This reluctance to test adults may stem from the respect for adult learners, and a fear that a low test score on a reading test might be interpreted as a judgment not only of the adult students' reading, but also of his or her intelligence. Another issue which needs to be addressed has to do with the standards of what is considered to be literacy, which must always be considered in a given cultural context. Different cultures tend to use different standards to describe what constitutes literacy.

Formal Assessment

A variety of attempts have been made to establish reliable assessment devices for older disabled readers. Karnes (1982), for example, suggested that evaluation needs to assess mental maturity and basic language skills. Karnes noted that the WISC-R is a balanced test by which one can base the prognosis of ability to learn and identify a developmental lag. The use of a silent reading test such as Gates MacGinitie was also suggested. He also suggested administration of a dictated spelling test which allows the subject being tested to concentrate on one word at a time and to recall vocabulary which is heard in verbal communication. In addition, a thorough evaluation of a potentially dyslexic subject would include a writing sample, or if the subject is unable to write, administration of the Draw-A-Person Test.

Kelly (1980) carried out a study to develop a screening process based upon reading and spelling patterns. He found a high degree of correlation between the reading and spelling performances of dyslexic children, so that how they read and spell are mutually predictive. Three patterns were found to be characteristic of disabled readers:

Group I: Reading and spelling patterns reflected a deficit function in the auditory channel, that is, a primary deficiency in the sound-symbol integration, and in the ability to develop phonetic skills. Remediation of this group of students would capitalize on visual strengths to overcome auditory inadequacies.

Group II: Reading and spelling spelling patterns reflected a deficit function in the visual channel, that is a primary deficiency in the ability to perceive a whole word. Remediation of this group of students would capitalize on the auditory strengths to overcome the visual inadequacy (for example, a phonics approach).

Group III. Reading and spelling patterns reflected a deficit function in both the auditory and visual channels. Remediation of this group of students would capitalize on a kinesthetic approach (for example, tracing the printed word).

Another approach to assessment of the dyslexic student has been to observe the phonological coding in the student. Johnston (1982) observed 9, 12, and 14-year-old dyslexics, and tested their recall of rhyming and non-rhyming strings of words presented auditorily . Although previous studies had found that dyslexic readers showed a phonemic confusability effect, this finding does not appear to be generalizable to older readers. Johnston concluded that teachers need to treat reading as a developmental skill, not just a cognitive task.

Informal Assessment

Teachers can also use observation to understand more about the dyslexic subject. Zigmond, Kerr, and Schaeffer (1988) observed the behavior pattern of learning disabled adolescents in high school academic classes. They painted a picture of the disabled adolescent as a passive learner who shows up for class

ill-equipped for the lesson (i.e., missing necessary pieces of school equipment), who passively follows teachers' procedural directions, who avoids giving information, and who seldom volunteers a comment or asks a question. The researchers suggested that learning disabled students may need direct instruction in such simple tasks as coming to class and remembering to bring the appropriate materials. They also need a better understanding of content in their mainstream core classes so they can participate in the dialogues between students and teachers.

Russell (1982), in a study of verbal processing of dyslexics, used the following criteria to identify his subjects:

1. Evidence of a learning disorder of reading, with reading attainment falling at least two years below expected, as predicted by age and I.Q.
2. A learning disorder of spelling, so that the spelling age is even lower than the reading age.
3. The absence of any evident basis for difficulties in learning, such as difficulties caused by deafness, blindness, cerebral injury, social deprivation, emotional disturbances, poor educational opportunity, or mental handicap.

Seidenberg (1987) studied the social and personal characteristics of learning disabled adolescents to find:

1. Social problems - LD students have more difficulty in solving social problems and are less likely to predict the consequences of social behaviors than their non-LD peers.

2. Verbal communication - The problems encountered by the LD students are often due to deficiencies in the pragmatics needed for interpersonal communication. They often lack an understanding of the rules that govern socially accepted speech interactions.

3. Affective motivation- Repeated failures lead LD students to believe they do not have the ability to succeed, and that their efforts do not lead to positive achievement outcomes.

The Brooklyn Campus Task Force in Learning How to Learn: A High School/College Linkage Model to Expand Higher Educational Opportunities for Learning Disabled Students (Barr, et al., 1987) has constructed a list of characteristics of learning disabled college students (see Appendix A). These include strengths in abstract reasoning, oral expression, use of compensatory skills, and adequate performance on untimed tests and assignments. Weaknesses may be apparent in reading, written language, listening and speaking, mathematics, organization and study skills, and/or social skills.

Affective Factors

Both Johnston (1985) and Balajthy (in press) have stated that the psychological and social factors of reading research and theory has been generally overlooked with the study of reading disabled students. Johnston suggested that reading theorists need to more seriously study the explanations which stress

combinations of anxiety attributions, maladaptive strategies, inaccurate or nonexisting concepts about aspects of reading, and the great variety of motivational factors. Current explanations with the focus on neural dysfunctions are isolated and sterile, with the focus on the level of operations, devoid of context, goals, motives and history. Until theorists integrate the human feelings and thinking and mental operations, they have only a shadow of an explanation of the problems. This will result in ill-directed attempts at solutions for learning/reading disabilities.

Remediation Programs

Chall (1987) has reminded educators that while elementary education has made great strides teaching children to read, the ability of older students to read has actually declined in recent years. She has also reminded that there is considerable research indicating that those with severe reading disabilities can make significant gains from remedial programs in both community colleges and four year colleges.

Providing proper instruction and appropriate materials can be seen as a major step in the remediation process. A study by Bristow (1988) investigated the validity of oral reading accuracy and comprehension as indicators of difficulty for functionally illiterate adults. The study was carried out with 81 adults enrolled in a class for illiterate adults. Oral reading accuracy, comprehension, reading rate, miscue quality, self-correction and subjective rating of

difficulty on an easier passage were used to assess reading ability. Accuracy and comprehension were found to be valid indicators of difficulty for these subjects. Rate and miscue quality were also strong indicators of reading ability. The author concluded that rate should be used in diagnosis and that fluency training should be added to instructional programs for illiterate adults. Fluency training can include techniques such as repeated reading of material.

Meyers (1987) described her experience with diagnosed dyslexic adults. She suggested the following, when working with adult disabled students:

1. Spend time getting to know the students.

2. Have the hearing and vision of each student assessed.

3. Spend some time every session reading to the adult student.

4. Make sure the student has reading material available at home. For example, help the student get a library card.

5. Tape interesting material, and have the printed form of the material available for the student.

6. Help the student to see himself as a reader.

7. Place some responsibility for learning in the student's hands.

8. Make reading real and meaningful.

Turner (1988) and Balajthy (1986; 1989) suggest using the

computer for instruction of older students. Turner noted that computers work well in adult literacy programs because they provide privacy, immediate feedback for students' responses, individualization, student control of learning, and flexibility in scheduling.

One major roadblock for adults in getting help with reading disabilities is that these students are often reluctant to admit a problem and receive the necessary help. The adult reading disabled student is adept at camouflaging his or her disability through years of practice. Computers provide an element of privacy for the adult to learn to read without embarrassment.

The use of the computer also allows adult students to remain in control of their learning. They can make decisions about their own education. This can be highly motivational, though teachers must also be aware of the difficulties of learner-control caused by poor metacognitive skills (Balajthy, 1988).

Balajthy (1989--see chapter on "Secondary and College Instruction in Reading") has noted that instructors must consider ways that microcomputers can be used today to improve--not simply replace--traditional reading instruction for learners at the college levels. Rather than waiting for software publishers to develop "reading for the main idea" drills at the twelfth-grade level to replace existing workbooks, instructors ought to take the opportunities provided by developments in the newer electronic media to reevaluate their pedagogical philosophies and methods. There is no need to wait for future developments in computer-based learning. Computers already can provide possibilities for helping teachers to meet objectives that are

difficult to obtain with traditional media.

Balajthy has suggested the following uses of computers for working with older students in reading:

Individualized skill development

Comprehension and vocabulary development

Content area vocabulary development

Test-taking skills

Speed reading

Integrating reading and writing using word processing

English-as-a-Second-Language instruction

Motivating independent reading

Study aids

Data-base management

Remote information retrieval

Forrester (1988) has offered several suggestions for remediation of reading disabled adults. He suggested that older writers will develop their writing skills more easily when they are encouraged to draw upon their own knowledge of language and of their world. One can write to read, and with this comes the excitement from adapting the attitude that with the Writing Process approaches, one does not need to be painstaking in a first draft, but can first start with approximation. A writer discovers that it really is appropriate to take a risk. To make writing/reading meaningful, the author suggests:

1. Link sight words with students' interests.
2. Show students how familiar they are with print.

3. Have small groups based on shared interests.

4. The teacher should model fluent reading.

5. Encourage the students to read along.

6. Get books on tape.

7. Use cloze material.

8. Discuss their reasons for wanting to read and write.

9. Have the adults bring in their own interesting reading material.

10. Trust the students to find their reading level.

Research has indicated that the dyslexic college student can go to college and be successful. According to Rothschild (1987), dyslexic adolescents often find it difficult to increase their scores on the verbal portion of SATs (which many colleges demand for admission to their college) due to factors characteristic of their language disability, such as vocabulary deficits, trouble differentiating literal and figurative words, difficulty rephrasing a reading selection (due to poor comprehension), and problems with abstract speech. Rothschild suggested that test-taking skills be facilitated through a structured program of vocabulary development and an increased understanding of test-taking strategies.

According to the Seelig (1987), the first step a college must make in dealing with disabled students is to understand them. The college-age disabled student has developed some coping mechanisms, some of which worked well, and some of which do not. Most LD students have in common two attributes:

1. A discrepancy between apparent ability to learn and academic performance (usually due to information processing deficits that impact learning).

2. Experience of repeated failures which reduce their achievement, efforts, and task motivations.

Seelig has considered a variety of ways in which college faculty can positively respond to the needs of disabled readers (see Appendix B). She suggests, for example, that

1. instructors allow students to dictate answers to essay examinations to demonstrate what they have learned

2. students take untimed tests in special supervised locations

3. students use tape recorders in class lectures and discussions

4. students use calculators during tests when math deficits affect performance.

Seelig's booklet includes a sampling of forms that can be employed by a Developmental Studies Program for working with the learning disabled population, including forms for assessment, tutorial program planning and evaluating, and content faculty contacts.

Appendix A

According to the Brooklyn Campus Task Force (Barr, et al., 1987), some of the characteristics displayed by LD college students include:

A. Strengths:

1. Often have keen abstract reasoning ability.
2. Tend to be verbal and articulate.
3. Have appropriate use of compensatory skills.
4. May perform adequately on an assignment or test, when time is not limited.

B. Reading Skills:

1. Slow reading rate and or difficulty in modifying reading rate in accordance with the material difficulty.
2. Difficulty following written directions.
3. Difficulty identifying important points and themes.
4. Reading skills are often not improved with standard remediation.

C. Written Skills

1. Difficulty with sentence structure.
2. Frequent errors in spelling and word usage.
3. Poor handwriting, slow writing, and inability to copy materials correctly.
4. Difficulty organizing written information to complete a written assignment.

D. Listening /Speaking Skills:

1. Difficulty in orally expressing ideas.
2. Difficulty telling a story or listing events

in proper sequence.

3. Difficulty comprehending or retaining a story in proper order.

E. Mathematical Skills:

1. Incomplete mastery of basic facts and concepts.
2. Difficulty recalling the sequence of an operational process.
3. Difficulty understanding and retaining abstract concepts.
4. Confusion in selecting appropriate abstract concepts.

F. Organization and Study Skills:

1. Time management and assignment completion difficulties.
2. Lack of overall organization in writing and speaking.
3. Trouble with logical sequence of ideas.
4. Difficulty attending to task.

G. Social Skills:

1. Some LD students have difficulties with new people and new situations.
2. Some LD students show rigidity and difficulty when changes in routines occur.
3. Difficulties in interpreting non-verbal messages in tone of voice.

H. Suggestions for Tutoring Reading:

1. Teach reading rate flexibility.
2. Teach comprehension skills - organization of books, chapters, materials.
3. Teach vocabulary development.
4. Teach strategy application.

Appendix B

Seelig (1987) has surveyed the literature to find the following suggestions for college faculty who wish to help learning disabled students:

1. Syllabus should provide a clear and detailed explanation of expectations. Assignments should be underlined in the course outline and calendar due dates specified.
2. New vocabulary should be emphasized by presentation on the chalkboard and in a handout.
3. Class sessions should include a review of material from the previous class session and an outline of the present session. The lesson should conclude with a summary of major points.
4. Study questions should indicate the relative importance of content, as well as the format of possible test questions.
5. The class should be structured to require participation of all students.
6. Use more than one modality to present information. This may involve listening, speaking, writing, or demonstrating.
7. Students with concentration difficulties and distractability should be encouraged to sit closer to the front.
8. For large class settings, small group activities led by advanced students may enhance understanding of class/text content and improve interpersonal skills.
9. Lectures and demonstrations should include concrete examples, practical application, and attention-getting devices.

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